

PATENT

Attorney Docket No.: 50623-00041

**AMENDMENTS TO THE CLAIMS:**

1. (Currently amended) A method of coating ~~a medical device, an~~ implantable medical device comprising the steps of:
  - a) ~~increasing the temperature of~~ heating the medical device to ~~an application temperature a~~ temperature greater than ambient temperature;
  - b) ~~applying~~ spraying a coating substance, wherein the coating substance includes a polymer and a fluid and optionally an active agent, onto the medical device after the ~~increasing~~ heating step; and
  - c) ~~maintaining the application temperature during the applying step.~~

wherein the coating substance is applied to the warm implantable device.
2. (Currently amended) The method of Claim 1, ~~wherein~~ wherein the implantable medical device is a stent.
3. (Canceled).
4. (Canceled).
5. (Currently amended) A method of coating ~~a medical device, an~~ implantable medical device comprising the acts of:
  - a) ~~applying~~ spraying a composition including a fluid, a polymer, and an active agent onto a medical device;
  - b) directing a gas with a temperature greater than ambient temperature onto the medical device subsequent to the ~~application of~~ spraying the composition to induce evaporation of at least a portion of the fluid from the composition; and

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- c) repeating the acts of ~~applying~~ spraying and directing to form multiple layers of the composition on the medical device.
6. (Canceled).
7. (Canceled).
8. (Canceled).
9. (Currently amended) The method of Claim ~~8, wherein~~ 37 wherein the act of spraying is performed at a flow rate of about 0.01 mg/sec to about 1 mg/sec.
10. (Previously presented) The method of Claim ~~8, wherein~~ 5 wherein the act of spraying is performed for a duration of about 0.5 seconds to about 5 seconds.
11. (Previously presented) The method of Claim 5, wherein the temperature of the gas is about 25°C to about 200°C.
12. (Previously presented) The method of Claim 5, wherein the act of directing is performed for a duration of about 1 second to about 100 seconds.
13. (Previously presented) The method of Claim 5, wherein the act of directing is performed at a flow rate of about 0.01 m<sup>3</sup>/second to about 1.42 m<sup>3</sup>/second.
14. (Canceled).
15. (Previously presented) The method of Claim 5, wherein the active agent is actinomycin D, paclitaxel, docetaxel, or rapamycin.
16. (Previously presented) The method of Claim 5, wherein the composition additionally includes a radio-opaque element or a radioactive isotope.

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17. (Currently amended) The method of Claim 5, ~~additionally~~additionally comprising rotating the ~~stentimplantable medical device~~ about the longitudinal axis of the ~~stentimplantable medical device~~.
18. (Currently amended) The method of Claim 5, ~~additionally~~additionally comprising moving the ~~stentimplantable medical device~~ in a linear direction along the longitudinal axis of the ~~stentimplantable medical device~~.
19. (Canceled).
20. (Currently amended) The method of Claim 5, ~~wherein~~ wherein the implantable medical device is a stent and the stent is at least partially expanded during the acts of applying and directing.
21. (Currently amended) The method of Claim 5, ~~additionally~~additionally comprising heating the ~~stentimplantable medical device~~ prior to the act of ~~applying~~spraying the composition, wherein ~~the temperature of the stentimplantable medical device is increased~~heated to a temperature greater than ambient temperature and is ~~maintained at a temperature greater than ambient temperature as~~ the composition is applied to the warm stentimplantable medical device.
22. (Currently amended) A method of coating ~~a medical device, an implantable medical device~~ comprising the acts of:
- a) spraying onto ~~a medical~~the implantable medical device a composition including a solvent, a polymer dissolved in the solvent, and optionally an active agent;
  - b) applying a gas with a temperature greater than ambient temperature onto the ~~medical~~the implantable medical device for a duration of about 1 second to

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about 100 seconds to remove at least a portion of the solvent from the composition; and

- c) repeating the acts of spraying and applying to form multiple layers of the composition.

23. (Canceled).

24. (Currently amended) The method of Claim 1, ~~wherein~~wherein the temperature ~~that is maintained during application~~greater than ambient is about 35°C to about 80°C.

25. (Previously presented) The method of Claim 1, wherein the coating substance comprises an ethylene vinyl alcohol copolymer or poly-n-butyl methacrylate.

26. (Currently amended) The method of Claim 5, ~~wherein~~wherein the act of repeating is performed 2 to ~~41~~39 times.

27. (Currently amended) The method of Claim 5, ~~additionally~~additionally including waiting for a period of about 0.1 seconds to about 5 seconds after application of the composition before directing the gas onto the ~~stent~~implantable medical device.

28. (Previously presented) The method of Claim 5, wherein the composition comprises a polymer selected from the group consisting of an ethylene vinyl alcohol copolymer and poly-n-butyl methacrylate.

29. (Currently amended) The method of Claim 5, ~~wherein~~wherein, during the act of ~~applying~~spraying, about 1 microgram of composition per cm<sup>2</sup> of ~~stent~~implantable medical device surface to about 50 micrograms of composition per cm<sup>2</sup> of ~~stent~~implantable medical device surface is applied.

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30. (Previously presented) The method of Claim 21, ~~wherein~~ wherein the fluid is selected from the group consisting of dimethylsulfoxide, dimethylformamide, and dimethylacetamide and combinations thereof.
31. (Currently amended) The method of Claim 21, ~~wherein~~ wherein the temperature ~~that is maintained during application~~ greater than ambient is 3.5°C to 80°C.
32. (Previously presented) The method of Claim 22, wherein the polymer comprises an ethylene vinyl alcohol copolymer or poly-n-butyl methacrylate.
33. (Currently amended) The method of Claim 22, ~~additionally~~ additionally including waiting for a period of about 0.1 seconds to about 5 seconds after spraying of the composition before applying the gas onto the ~~stent~~ implantable medical device.
34. (Previously presented) The method of Claim 22, wherein the solvent is selected from the group consisting of cyclohexanone, ethyl acetate, chloroform and methanol.
35. (Withdrawn) A method of coating a stent, comprising the steps of:
- a) adjusting the temperature of the stent to an application temperature below ambient temperature;
  - b) applying a coating substance, wherein the coating substance includes a polymer and a fluid and optionally an active agent, onto the stent after the adjusting step; and
  - c) maintaining the application temperature during the applying step.
36. (Previously presented) The method of Claim 2 wherein the stent is metallic.
37. (Currently amended) The method of Claim 5 wherein the implantable medical device is a stent.

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38. (Previously presented) The method of Claim 37 wherein the stent is metallic.
39. (Currently amended) The method of Claim 22 wherein the implantable medical device is a stent.
40. (Previously presented) The method of Claim 39 wherein the stent is metallic.
41. (Currently amended) A method of coating ~~a medical device~~, an implantable medical device comprising the steps of:
- a) ~~increasing the temperature of~~ heating the medical device to ~~an application temperature~~ a temperature greater than ambient temperature;
  - b) applying a coating substance onto the medical device after the increasing step wherein the coating substance includes a polymer dissolved in a fluid and optionally an active agent and wherein applying comprises spraying the composition onto the medical device; and
  - c) ~~maintaining the application temperature during the applying step.~~
- wherein the coating substance is applied to the warm implantable device.
42. (Currently amended) A method of coating a stent comprising the steps of:
- a) ~~increasing the temperature of~~ heating the stent to ~~an application temperature~~ a temperature greater than ambient temperature;
  - b) applying a coating substance onto the stent after the increasing step wherein the coating substance includes a polymer dissolved in a fluid and optionally an active agent and wherein applying comprises spraying the composition onto the stent; and
  - c) ~~maintaining the application temperature during the applying step.~~

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wherein the coating substance is applied to the warm implantable device.

43. (Currently amended) A method of coating ~~a medical device~~, an implantable medical device comprising the steps of:

- a) ~~increasing the temperature of heating~~ the medical device to a temperature greater than ambient temperature;
- b) ~~applying~~ spraying a coating substance including a fluid onto the warm medical device after the increasing step;
- c) directing a gas with a temperature greater than ambient temperature onto the medical device subsequent to the application of the composition to induce evaporation of at least a portion of the fluid from the composition; and
- d) repeating the acts of ~~applying~~ spraying and directing to form multiple layers of the composition on the medical device.

44. (Currently amended) A method of coating ~~a medical device~~, an implantable medical device comprising the steps of:

- a) ~~increasing the temperature of heating~~ the medical device to a temperature greater than ambient temperature;
- b) spraying a coating substance onto the warm medical device ~~after the increasing step~~ wherein the composition includes a solvent, a polymer dissolved in the solvent, and optionally an active agent; and
- c) applying a gas with a temperature greater than ambient temperature onto the medical device for a duration of about 1 second to about 100 seconds to remove at least a portion of the solvent from the composition; and
- d) repeating the acts of spraying and applying to form multiple layers of the composition.